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6G wireless technology could use humans as a power source, study explains

JANUARY 5, 2023



by Chris Melore

AMHERST, Mass. — 5G wireless technology is just starting to take off worldwide, but a new study is already speculating on the future of 6G! Researchers from the University of Massachusetts-Amherst say, unlike older technology, 6G could end up using people as antennas.

Specifically, 6G telecommunications could possibly take advantage of Visible Light Communication (VLC), which is like a wireless version of fiber optics. Right now, fiber optics use incredibly thin glass or plastic strands to transmit information on flashes of light. These wires are extremely small, but also extremely fragile.

The UMass Amherst team says they have created a low-cost and innovative way of harvesting waste energy from VLC — using the human body as an antenna. Their invention can recycle waste energy to power wearable devices and possibly larger electronics as well.

“VLC is quite simple and interesting,” says Jie Xiong, professor of information and computer sciences at UMass Amherst, in [university release](#). “Instead of using radio signals to [send information wirelessly](#), it uses the light from LEDs that can turn on and off, up to one million times per second.”

What makes VLC so appealing to the future of wireless technology is the fact that the infrastructure to use it already exists. Thanks to modern technology and smart devices, our homes, vehicles, streetlights, and offices are all lit by LED bulbs, and they could also be transmitting data.

“Anything with a camera, like our smartphones, tablets or laptops, could be the receiver,” Xiong explains.

6G could rely on VLC ‘leakage’

The team explains that VLC systems experience a [significant “leakage” of energy](#) because LEDs emit “side-channel RF signals” — or radio waves. If scientists are able to harvest this RF energy, they can put it to use.

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related to it from there, the biggest question is what kind of object maximizes the collection of this energy?

Researchers experimented with all sorts of surfaces and thicknesses of wire. After resting the coil against plastic, cardboard, wood, and steel, as well as phones and other digital devices turned on and off, first author Minhao Cui tried wrapping the coil **around a human body**.

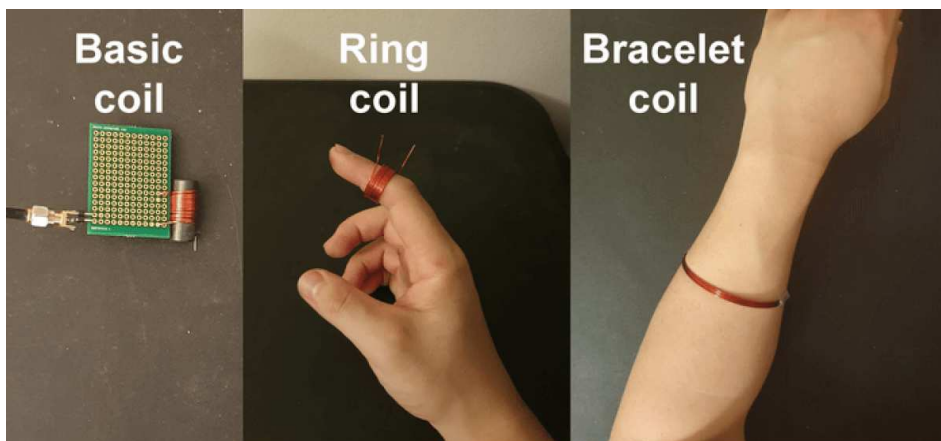


The team experimented using different daily objects to amplify the harvested power, and discovered that the human body is one of the best materials. CREDIT: Cui et al., 10.1145/3560905.3568526

Results show people are actually the best medium for amplifying the coil's ability to collect leaked RF energy. Attaching the coil to a person collected up to 10 times more energy than just using a bare coil.

A cheap bracelet could give you 6G service

Based on these results, the researchers created an inexpensive, **wearable device** called the “Bracelet+,” which people can wear on their upper forearm. Study authors note they can even modify it to work as a ring, belt, anklet, or necklace — although a bracelet seemed to work best for harvesting power.



Different coil designs influence the amount of power harvested. CREDIT: Cui et al., 10.1145/3560905.3568526

“The design is cheap—less than fifty cents,” the study authors note. “But Bracelet+ can reach up to micro-watts, enough to support many sensors such as on-body health monitoring sensors that require little power to work owing to their low sampling frequency and long sleep-mode duration.”

“Ultimately, we want to be able to harvest waste energy from all sorts of sources in order to power future technology,” Xiong concludes.



TAGS: 5G, 6G, WIRELESS TECHNOLOGY

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About the Author

Chris Melore

Chris Melore has been a writer, researcher, editor, and producer in the New York-area since 2006. He won a local Emmy award for his work in sports television in 2011.

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Comments

Bob says:

January 11, 2023 at 8:10 pm

Idiots using cell phones have only themselves to blame.

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k mc says:

January 6, 2023 at 5:52 pm

It’s designed for the beast system to control the masses..

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Jane Doe says:

January 7, 2023 at 5:18 am

Trump:.. “We MUST get 6G NOW!!”.

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Bob Jackson says:

January 6, 2023 at 12:10 pm

[Reply](#)**Patricia A. Ormsby** says:**January 6, 2023 at 7:27 pm**

My husband has been experiencing tinnitus too, whenever he's in an area with 5G reception. Neither of us has smartphones or wearables.

[Reply](#)**sandnomad** says:**January 6, 2023 at 11:10 am**

The key to knowledge is light, and God is light, 1 John 1:5. This planet has been bombarded with RRB's for many years, but there are few receivers, and no scientist can pinpoint the origin of those rapid radio bursts, because the extent of the universe, which is constantly expanding, remains unknown, just as the invisible God remains unknown to the carnally minded, because God is not a man, nor the Son of Man, Numbers 23:9, because God is a spirit, John 4:24.

[Reply](#)**Conrad** says:**January 6, 2023 at 11:08 am**

Looks like a great way to EXPEDITE CANCER!

[Reply](#)**Mother Teresa** says:**January 6, 2023 at 7:31 pm**

Do a deep dive on the correlation between parasitic infections and "cancer". And after a couple days of researching "Parasites IS cancer" (not what medical and nursing schools teach – because they are funded by greed and profits and not truth – truth is the death of their profits). No one will be able to ever think of "cancer" the same. Julius Caesar was the first historically documented patient zero for cancer...yet "no cure", because they don't want a "cure". Chemotherapy (which kills parasites and the host body – it was patented by IG Farben (look what company TODAY is the former IG Farben) and it is the number one most profitable money maker among all of the pharamakia treatments available at a tune of 24,000 dollars per treatment. Do you reallllllyyy think they are going to tell the general public that parasites IS "cancer"? Hell no, they need that money coming in and they withhold ivermectin, albendazole, fenbendazole, etc – and it gets REALLLLLL interesting when curiously, all known antiworm (anthelmintic) drugs just so happen to KILL CANCER. Please for the sake of your loved ones, do this research. Artemisinin, ginger, garlic, papaya seeds, black walnut hulls and cutting out all sugar in addition to taking anthelmintic drugs will completely restore the energy in your body. And why is it that cysts are called cancer when it is accepted in science that parasitic eggs are called CYSTS? I can keep going but I'd rather you do the research so you will be blown away. This is the largest medical conspiracy yet to be exposed...and when this is known, it will bankrupt the corrupt pharamakia companies and bring a renaissance to human health. God bless you all. <3

[Reply](#)**Hank** says:**January 9, 2023 at 12:43 am**

Cancer is the price we have chosen to pay in exchange for the morality of sexually oppressing children.

Adults having sex is what causes the plague. Simply outlawing sex with anybody over 16 would wipe cancer off the earth. This is the secret immoral

Every day post-pandemic you have to stress just to live the almost open for environmental pollution to build up in your epigenome to eventually get inherited by your child as cancer.
Sterilize yourself, be part of the solution not part of the disease.

[Reply](#)



John Martin says:

January 12, 2023 at 8:54 am

Can you recommend any references via videos, books etc. as to what you're saying here that I could read or watch for research purposes?

[Reply](#)



John says:

January 6, 2023 at 10:45 am

Sick maniacal satanic psychopathic filth.

[Reply](#)



stogiegy7 says:

January 6, 2023 at 10:25 am

There's nothing new about the human body being an antenna – it's been one ever since the first radio waves were broadcast. Those of you who are old enough to remember analog TV (or FM radios with an antenna) may well recall that a fringe signal can be improved by holding the antenna – which works because you're part of the antenna now. You always are, but by holding the antenna, the effect is now revealed.

This idea plays on the above simple concept. Frankly, I'm somewhat skeptical that this will remain a theoretical for many years to come because it's one thing to prove a theory and quite another to implement it throughout society. Still, don't be freaked out about being "used as an antenna" because you're one anyway.

[Reply](#)

WarPony says:

January 6, 2023 at 9:16 am

So, in other words, our bodies are being constantly bombarded by electromagnetic sluff thanks to all the tech we've already put in place. That's got to be healthy. /s

[Reply](#)

Kate says:

January 6, 2023 at 6:43 am

More of the MOTB, is all this is.

[Reply](#)

GodsendNYC says:

January 6, 2023 at 3:56 am

Well, the title is pretty misleading. Humanscale won't be the power source but the transceiver of power but still an interesting application if they can get useful amounts of energy from it to power health sensors.

[Reply](#)

Kurt says:

January 5, 2023 at 11:11 pm

It's sad to think that people are so stupid that they think this is a good idea.

godsfinders says:

January 5, 2023 at 10:53 pm

I removed all the LEDs from our new home and installed incandescents that I stockpiled when obama made them illegal.....so sue me....

[Reply](#)

Bryan says:

January 6, 2023 at 9:19 am

Incandescent bulbs are not illegal. You can own as many as you can get your hands on. Above a certain wattage are not manufactured, if that's what you're talking about. Either way, I doubt anyone really cares if you own them, but hopefully you feel better after getting that off your chest.

[Reply](#)

Kriston says:

January 7, 2023 at 2:16 pm

Imaooo

[Reply](#)

Javier says:

January 5, 2023 at 8:00 pm

"Someone" is hellbent on Transhumanism. Where does this end... with fake brains?

[Reply](#)

Mother Teresa says:

January 6, 2023 at 7:41 pm

Javier,

You are very perspicacious with your analysis. The trend is certainly clear and the WEF is steering the world to that outcome. Please research Steve Quayle. He was the first person to expose this and to this day, is still vociferously trying to help humanity not succumb to the oldest lie – transhumanism – “for ye shall not die, but live as Gods”. As in the days of Noah, so it shall be in the end. In Noah’s day, genetic manipulation of all plants and animals was occurring, thus the Great Deluge which is even recording in Native American petroglyph fossil record...

And it is open source intelligence, not a “conspiracy” any longer, when one looks at the actual patents of mRNA technology shots, it openly expresses that it CHANGES YOUR DNA via Crispr Cas-9 gene editing. And in the patent is a translucent protein called “luciferase”. Truth is way stranger than fiction. Please research these things so you can help the people you love most in your life not be deceived. God bless you all. <3

[Reply](#)

Ghislain Gagnon says:

January 13, 2023 at 11:13 am

Where this is going is to remove the attribute that mankind is made in the image of God.

Once we are not humans anymore we are not redeemable anymore because we are not human anymore.

The war for the soul of man rages on.

They are attempting to change our DNA

[Reply](#)

UncaDon says:

January 5, 2023 at 6:38 pm

The author needs to go back to physics class. His statement “LEDs emit “side-channel RF signals” — or radio waves” is complete and utterly B.S. LEDs are semiconductors, just like the zillions of transistors in your phone/laptop/anything smart. THEY DO NOT EMIT RADIO WAVES. What the researchers were doing is harvesting RF energy from other radio transmitters, not the LEDs being used for communications. If what he said were true, with the LED being used for communications is also powering the transmission device you would have the energy equivalent of perpetual motion.

Also, using light to transmit data through the air has been used for years. Nothing magical here. From Wikipedia “In 1880, Alexander Graham Bell invented the photophone, the world’s first wireless telephone system.”

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Reply



Bryan says:

January 6, 2023 at 9:28 am

Actually, they do. It’s caused by the circuit boards that control the LED bulbs that emit the signal. The Coast Guard had a problem with the interference the signal created with LEDs installed too close to some antennas. Most quality LEDs do a good job of suppressing the signal, but some cheaper ones don’t.

Reply



UncaDon says:

January 6, 2023 at 1:37 pm

It’s the traces on the circuit board that are emitting the RF, not the LEDs. But the RF is a function of the frequency that the circuit is running at. A DC powered LED does not emit RF. A DC non-LED circuit does not emit RF. Computers, for example, run at high frequencies that create all kinds of RF emissions, even where there are NO LEDs. That is why you have those weird bumps on some computer cables, it’s to block the RF that is generated by the digital circuits from entering or leaving a device. High speed digital circuit board design is as much an art as a science to reduce the amount of RF coming off of the circuit board. But it has NOTHING to do with LEDs like the author is stating or the ‘quality’ of the LED.

Most LED circuits dim the output by turning the LED on and off rapidly, thousands (or more) of times per second. It’s called Pulse Width Modulation. Those on-off pulses generate harmonics many times higher than the pulse frequency. That’s what may be causing the Coast Guard problem, NOT the LEDs, but the circuit driving them.

Reply



Paul says:

January 6, 2023 at 10:10 am

No, they really do emit RF signals. It’s caused by the circuit board. Most bulbs suppress the signal but it is there. Cheaper bulbs may not and can cause interference.

Reply



dave says:

January 5, 2023 at 6:23 pm

6G to use human body as antenna

Virtual Reality to use human body as battery

Reply



PhuckBidenhard says:

January 5, 2023 at 5:43 pm

It's all BS, of course. 5G is already damaging the human body and interfering with high end electronics, to wit: aircraft. How bad can it get. These “geniuses” just don’t think outside the bottle.

Reply



FoolishElitists33 says:

January 5, 2023 at 5:27 pm

Poison Zap Rays!

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